



AN ANALYSIS ABOUT DANTADHAVANA DRAVYAS IN BRIHATRAYI

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ABSTRACT

Dantadhavana under *dinacarya* is an important procedure in daily practice in preventive point of view. *Ayurveda Samhita* such as *Charaka Samhita*, *Sushruta Samhita* and *Ashtang Hridaya* which are popularly known as *Brihatrayi* had focused on *dantadhavana* as oral hygiene. As per National Oral Health Survey and Flouride Mapping (2002-2003), Dental Council India, New Delhi 2004, the prevalence of periodontal disease was 57%, 67.7%, 89.6%, and 79.9% in the age groups 5, 12, 15, 35-44, 65-74 years respectively¹. Plants used in *dantadhavana* should be either of *kashaya*, *katu* and *tikta rasa* which have *Kapha-vatahara* property. *Katu rasa* helps to purifies oral cavity and opens channels. *Tikta rasa* also possesses *Krimihara*, *Kanduhara* properties. *Kashaya rasa* have *Vranahara* (healing) property, helps to maintain oral health. Pharmacological studies on various drugs of *Dantadhavana* proved its significance in oral health. Hence this article is an attempt to make a brief review on *Dantadhavana Dravya's* in *Brihatrayi*.

KEYWORDS: *Brihatrayi*, *Dantadhavana*, *Dinacarya*, Hygiene, Oral Health

INTRODUCTION

The most important objective of *Ayurveda*, the science of life, mainly emphasises on preservation of health and pacification of diseases². For preservation and promotion of health, various regimens are mentioned in *Ayurveda* i.e. *Dinacharya* (Daily routines) along with *Ratricharya* (Night regimen), *Ritucharya* (Seasonal regimen) and *sadvritta*, *Achara Rasayana* (Behavioural conducts).

The regimens which should be followed on daily routines comes under *Dinacharya* in *Ayurveda* which includes measures like *brahmamuhurta uthithsta abhyanga*, *vyayama*, *snana*, etc. deals mainly with over all mental, physical, social as well as spiritual health, whereas measures like *dantadhavana*, *pratisarana*, *jivha nirlekhana*, *gandusha* and *kavala karma* are deals with health of specific body part which have indirect impact on maintenance of positive health. These daily routines have physiological impact on proper functioning of the body and maintaining a state of normal equilibrium of *doshas*, *dhatu*s, *malas* and *agni*. *Ayurveda* describes *Dinacharya* measure like *dantadhavana*, *pratisarana*, *jivha nirlekhana*, *gandusha* and *kavala karma* are responsible for maintenance of oral health as well as prevention and treatment of diseases of oral cavity. Among all the measures *dantadhavana* is the important routine practice / procedure in order to maintain the oral hygiene. Reference regarding *dantadhavana* is available in various *Ayurveda* classics texts.

Oral hygiene plays an important role in maintenance of health and prevention of disease. Dental caries and periodontal disease are the more common worldwide prevalent dental ailments due to pathogenic organisms leading to the development

of pyorrhoea alveolaris, which may cause premature fall of teeth, infective endocarditis, rheumatic carditis and aspiration pneumonia. Regular tooth brushing or *dantadhavana* is very necessary to remove any dental plaque or food debris to maintain oral hygiene.

Drugs of *Dantadhavana* reported to possess antibacterial, antimicrobial, anti-inflammatory antiulcer and wound healing properties through which oral hygiene and overall health of an individual can be achieved. Various *Dravyas* such as *Arka*, *Karanja*, *Kaeveera*, *Khadira*, *Nimba*, *Malati*, etc are mentioned in *Brihatrayi* as *Dantadhavana*.

Method, Timing and Drugs indicated for *Dantadhavana*

Various *Dravyas* such as *Arka*, *Karanja*, *Kaeveera*, *Khadira*, *Nimba*, *Malati*, etc are mentioned in *Brihatrayi* as *Dantadhavana*. According to *Vagbhata*³ the rasas of the drugs mainly are *kashaya*, *tikta* and *katu*. In morning after evacuation of urine and faeces, and after having meal one should clean the teeth with the twigs in which the tip of the stick chewed to prepare soft bristle and teeth cleaned without harming the gum. Cleaning should be done one after another starting from the lower gum. Twigs should be fresh, straight and free from insect infection. Length should be 12 *Angula* (9 inches) and thickness like tip of the little finger has been mentioned as *dantakastha*. *Charaka* mentioned one should do *dantadhavana* two times a day for the maintaining normal oral hygiene. Some *Acharya* recommended using powder of *trikatu* mixed with *madhu* (honey) or *saindhava* (rocksalt) with oil or *tejovati* along with twig⁴. Detail description regarding botanical name, *rasa*, *guna*, *virya*, *vipaka*, *karma* and reported pharmacological activity of the twig used for *dantadhavana* are mentioned in the table 1.

Sr.	Drugs	Botanical name	Rasa	Guna	Virya	Vipaka	Karma	Reported Pharmacological activity
Charaka Samhita								
1	Arka ⁵	<i>Calotropis procera</i> (Ait)	Tikta, Katu, Madhura	Laghu, Ruksha, Tikshna	Ushna	Katu	Kapha-vatahara, Vranashodhana, Krimighna	Anti-microbial
2	Asana ^{6,7}	<i>Pterocarpus marsupium</i> Roxb.	Kashaya, Tikta	Laghu, Ruksha	Ushna	Katu	Kapha-pittahara, Krimighna	Anti-microbial, anti-inflammatory, anti-fungal
3	Karanja ⁸	<i>Pongamia pinnata</i> Linn.	Tikta, Katu, Kashaya,	Laghu, Tikshna	Ushna	Katu	Kapha-vatahara, Vranaropana, Jantughna, Kandughna	Anti-bacterial, wound healing
4	Karavira ^{7,9}	<i>Nerium indicum</i> Mill.	Katu, Tikta, Kashaya	Laghu, Ruksha, Tikshna	Ushna	Katu	Kapha-vatahara, Krimighna, Kandughna, Vranaropana	Anti-fungal, anti-ulcer, anti-inflammatory, analgesic
5	Kukubha ¹⁰	<i>Terminalia arjuna</i> Roxb.	Kashaya	Laghu, Ruksha	Sheeta	Katu	Kapha-pittahara, Vranaropana,	Anti-bacterial, anti-fungal
6	Malati ^{7,11}	<i>Hiptage benghalensis</i> Kurtz.	Madhura, Tikta, Kashaya	Laghu	Sheeta	Madhura	Vranaropaka, Krimighna, Kandughna	Anti-bacterial, anti-ulcer, anti-microbial
Sushruta Samhita								
1	Karanja ⁸	<i>Pongamia pinnata</i> Linn.	Tikta, Katu, Kashaya,	Laghu, Tikshna	Ushna	Katu	Kapha-vatahara, Vranaropana, Jantughna, Kandughna	Anti-bacterial, wound healing
2	Karavira ^{7,9}	<i>Nerium indicum</i> Mill.	Katu, Tikta, Kashaya	Laghu, Ruksha, Tikshna	Ushna	Katu	Kapha-vatahara, Krimighna, Kandughna, Vranaropana	Anti-fungal, anti-ulcer, anti-inflammatory, analgesic
3	Khadira ^{7,12}	<i>Acacia catechu</i> Willd.	Tikta, Kashaya	Laghu, Ruksha	Sheeta	Katu	Kaphapittahara, Kandughna, Vranaropaka	Anti-inflammatory, anti-microbial, anti-fungal
4	Madhuka ^{7,13}	<i>Madhuka longifolia</i> Macbr.	Madhura, Kashaya	Guru, Snigdha	Sheeta	Madhura	Vata-pittahara, Dahaprashmana	Anti-ulcer, anti-bacterial
5	Nimba ¹⁴	<i>Azadiracta indica</i> A. Juss.	Tikta, Kashaya	Laghu	Sheeta	Katu	Kaphapittahara, Krimighna, Vranashodhna, Jantughna	Anti-microbial, anti-bacterial, anti-inflammatory, anti-ulcer
6	Trikatu ^{15,16,17} (Sunthi, Pippali, Maricha)	<i>Zingiber officinalis</i> Rosc., <i>Piper longum</i> Linn., <i>Piper nigrum</i> Linn.	Katu	Laghu, Ruksha, Tikshna, Snigdha	Ushna, Anushna, sheeta	Madhura, Katu	Kapha-vatahara, Jantughna, Krimighna	Anti-bacterial, anti-ulcer, analgesic, anti-inflammatory, anti-oxidant, anti-microbial
7	Trijataka ¹⁸ (Tvaka, Ela, Patra)	<i>Cinnamomum zeylanica</i> Blume, <i>Elettaria cardamomum</i> , <i>Cinnamum tamala</i>	Katu, Tikta, Madhura	Laghu, Ruksha, Tikshna	Ushna	Katu	Kapha-vatahara, Vranashodhaka, Vranaropaka	Anti-bacterial, anti-microbial, anti-fungal, anti-oxidant

Astangasangraha								
1	<i>Apamarga</i> ¹⁹	<i>Achyranthes aspera</i> Linn	Katu, Tikta	Laghu, Ruksha, Tikshna	Ushna	Katu	Kapaha-vatahara, Kandughna, Krimighna	Anti-microbial, anti-fungal
2	<i>Arimeda</i> ^{7,20}	<i>Acacia leucophloea</i> Willd.	Kashaya, Tikta	Laghu, Ruksha	Ushna	Katu	Kaphahara, Kandughna, Krimighna, Vranashodhana	Anti-bacterial, anti-microbial
3	<i>Arka</i> ⁵	<i>Calotropis procera</i> (Ait)	Tikta, Katu, Madhura	Laghu, Ruksha, Tikshna	Ushna	Katu	Kapha-vatahara, Vranashodhana, Krimighna	Anti-microbial
4	<i>Asana</i> ^{6,7}	<i>Pterocarpus marsupium</i> Roxb.	Kashaya, Tikta	Laghu, Ruksha	Ushna	Katu	Kapha-pittahara, Krimighna	Anti-microbial, anti-inflammatory
5	<i>Karanja</i> ⁸	<i>Pongamia pinnata</i> Linn.	Tikta, Katu, Kashaya,	Laghu, Tikshna	Ushna	Katu	Kapha-vatahara, Vranaropana, Jantughna, Kandughna	Anti-bacterial, wound healing
6	<i>Karavira</i> ^{7,9}	<i>Nerium indicum</i> Mill.	Katu, Tikta, Kashaya	Laghu, Ruksha, Tikshna	Ushna	Katu	Kapha-vatahara, Krimighna, Kandughna, Vranaropana	Anti-fungal, anti-ulcer, anti-inflammatory, analgesic
7	<i>Khadira</i> ^{7,12}	<i>Acacia catechu</i> Willd.	Tikta, Kashaya	Laghu, Ruksha	Sheeta	Katu	Kaphapittahara, Kandughna, Vranaropaka	Anti-inflammatory, anti-microbial, anti-fungal
8	<i>Kukubha</i> ¹⁰	<i>Terminalia arjuna</i> Roxb.	Kashaya	Laghu, Ruksha	Sheeta	Katu	Kapha-pittahara Vranaropana,	Anti-bacterial, anti-fungal
9	<i>Malati</i> ^{7,11}	<i>Hiptage benghalensis</i> Kurtz.	Madhura, Tikta, Kashaya	Laghu	Sheeta	Madhura	Vranaropaka Krimighna, Kandughna	Anti-bacterial, anti-ulcer, anti-microbial
10	<i>Sarja</i> ^{21, 22}	<i>Vateria indica</i> Linn.	Kashaya	Laghu, Snigdha	Sheeta	Katu	Kapha-pittahara, Vranaropana	Anti-ulcer, Anti-inflammatory
11	<i>Vata</i> ²³	<i>Ficus benghalensis</i> Linn.	Kashaya	Guru, Ruksha	Sheeta	Katu	Kapha-pittahara, Vranaropana	Anti-oxidant
Astanga Hridaya								
1	<i>Arka</i> ⁵	<i>Calotropis procera</i> (Ait)	Tikta, Katu, Madhura	Laghu, Ruksha, Tikshna	Ushna	Katu	Kapha-vatahara, Vranashodhana, Krimighna	Anti-microbial
2	<i>Karanja</i> ⁸	<i>Pongamia pinnata</i> Linn.	Tikta, Katu, Kashaya,	Laghu, Tikshna	Ushna	Katu	Kapha-vatahara, Vranaropana, Jantughna, Kandughna	Anti-bacterial, wound healing
3	<i>Khadira</i> ^{7,12}	<i>Acacia catechu</i> Willd.	Tikta, Kashaya	Laghu, Ruksha	Sheeta	Katu	Kaphapittahara, Kandughna, Vranaropaka	Anti-inflammatory, anti-microbial, anti-fungal
4	<i>Kukubha</i> ¹⁰	<i>Terminalia arjuna</i> Roxb.	Kashaya	Laghu, Ruksha	Sheeta	Katu	Kapha-pittahara Vranaropana,	Anti-bacterial, anti-fungal
5	<i>Nyagrodha</i> ²³	<i>Ficus benghalensis</i> Linn.	Kashaya	Guru, Ruksha	Sheeta	Katu	Kapha-pittahara, Vranaropana	Anti-oxidant

Table 1: Drugs indicated for *Dantadhavana* in *Brihatrayi* with *Karma* and it's reported Pharmacological activity

Benefits of *Dantadhavana*

Oral hygiene plays an important role in maintenance of health. Removes halitosis, dysgeusia, induces taste for food by removing the impurities from the tongue, mouth and teeth, bad odour, and brings freshness²⁴.

Contraindication

Dantadhavana is contraindicated for the person who are suffering from *ajeerna* (indigestion), *vamathu* (vomiting), *svasa* (dyspnoea, asthma), *kasa* (cough), *jvara* (fever), *ardita* (facial palsy), *trishna* (thirst), *asyapaka* (stomatitis), *hrdroga* (cardiac disorders), *netra roga* (eye diseases), *siro roga* (diseases affecting head) and *karna roga* (ear disease)²⁵.

DISCUSSION

Oral hygiene plays an important role in maintenance of health and prevention of disease. 85 percent of children and 95 to 100 percent of adult in India suffers from periodontal diseases as per report²⁶. Bacteria produce acid from food debris present in the oral cavity which causes dental plaque and leads to dental decay and periodontal diseases. Hence tooth brushing should perform for oral health promotion.

Drugs such as *Kukubha*, *Khadira*, *Malati*, *Asana*, etc. reported to have anti-microbial activity. Taxifolin- main chemical constituent of *Khadira* reported to possesses antibacterial, anti-inflammatory and anti-oxidant activity. Plants used in *dantadhavana* should be either of *kashaya*, *katu* and *tikta rasa* which have *Kapha-vatahara* property. *Katu rasa* helps to purifies oral cavity, kills *krimi* and opens channels. *Tikta rasa* also possesses *Krimihara*, *Kanduhara* properties. *Kashaya rasa* have *Vranahara* (healing) property (Table 1). *Dantadhavana* with herbal products help to change the pH of saliva to become alkaline.

CONCLUSION

Regular brushing with the help of herbal products and proper child education about oral hygiene is key for oral health and also inevitable for the maintenance of proper health which helps to prevent most common problems such as halitosis, dental carries, periodontal disease, etc. *Dantadhavana* is one among the oral cleansing procedures mentioned under *Dinacharya* by various *Acharya's* in *Samhita* to promote oral hygiene and prevent oral health problem.

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